

STATE OF VERMONT
SUBSTANCE ABUSE ASSESSMENT AND
EPIDEMIOLOGICAL PROFILE

Executive Summary
March, 2012

PREPARED BY THE
STATE EPIDEMIOLOGICAL OUTCOMES WORKGROUP

EXECUTIVE SUMMARY

The Substance Abuse Epidemiological Profile was originally developed as part of the planning process for Vermont's Strategic Prevention Framework State Incentive Grant (SPF-SIG), awarded to the state by the Center for Substance Abuse Prevention (CSAP), Substance Abuse and Mental Health Services Administration (SAMHSA). The original Epidemiological Profile and accompanying Executive Summary was published in 2007 in order to offer an empirical basis for the selection of substance abuse prevention priorities to address at a state and community level. This is an update and expansion of that original document. As such, it is intended to assist policy makers and practitioners in monitoring trends and patterns in substance abuse indicators and thereby continue to guide the identification of the state's most pressing substance abuse concerns. We recognize that non-epidemiological considerations will also influence the policies and priorities of Vermont's substance abuse prevention and treatment systems, but believe that broad-based epidemiological data provides an essential foundation for planning and decision-making.

This Executive Summary provides selected highlights from the most relevant and methodologically rigorous data sources. These data sources include the National Survey on Drug Use and Health (NSDUH), the Youth Risk Behavior Survey (YRBS), and the Behavioral Risk Factor Survey System (BRFSS). In addition, we highlight findings from additional data sources of interest. This summary focuses on statewide data, whereas the full report provides regional and county-level comparisons for as many of the data sources where this level of data was available.

The Vermont Department of Health takes a ***public health approach*** to preventing substance related problems, focusing on population level change in which the goal is to reduce community-level and/or state-level indicators of substance use and related consequences. Effective substance abuse prevention is grounded in a solid comprehension of alcohol, tobacco, and other drug ***consumption and consequence patterns***. Understanding the nature and extent of consumption (e.g., underage drinking) and associated consequences (e.g., motor-vehicle crashes, substance-related hospital admissions, etc.) is critical for determining prevention priorities, aligning strategies to address them, and assessing progress in reducing them. The priorities identified are also congruent with specific goals established in the US Healthy People 2020 and/or the Vermont Department of Health Strategic Plan. Reduction of substance use and abuse among adolescents and young adults is an overall goal in these policy statements; reductions in alcohol use, binge drinking, and marijuana use among these age groups are specific targets.

Key Findings in the 2012 Update

This document summarizes the most up-to-date data available on alcohol, tobacco, and other drug use, and consequences associated with use/abuse in Vermont, and the state's ranking relative to other states. In addition, we include new data on substance use and abuse as it relates to behavioral health among Vermonters who enter the mental health system. In addition, we include discussion of specific sub-populations that may be at increased risk for substance use and associated consequences. Although this document is more comprehensive than the original Epidemiological Profile, the same substance-related themes emerged from the data as before. While several areas are notable for significant declines in substance use, this document is consistent with previous efforts in suggesting the same areas of concern. As demonstrated below, the substance use and abuse data relevant to Vermont clearly and unambiguously point to three specific areas of concern that should continue to receive high priority in the state's prevention efforts. These areas of concern are ***underage drinking, high risk drinking (ages 21-24), and marijuana use (under age 25)***.

Demographics

Vermont ranks 49th in population and 45th in geographic area among the 50 States. The State has a relatively homogeneous racial make-up with 96.5% of the population listing their race as white; 1.3% Hispanic; 1.2% Asian; 0.8% African American; 0.4% American Indian; and 1.1% list two or more races. Vermont has the second highest median age in the nation at 41.2 years.

Key Indicators of Use from the Youth Risk Behavior Survey and the National Survey on Drug Use and Health

Figure 1 presents data from the Youth Risk Behavior Survey (YRBS) for lifetime prevalence rates of alcohol and other drugs from 2001 to 2011.

Table 1 summarizes data derived from the latest National Survey on Drug Use and Health (NSDUH) for Vermont and compares the prevalence rates of substance use across two different survey administrations to examine change over time. There were significant decreases over the period; in no case was there an increase in reported use of any substance. Table 1 also includes Vermont ranking of prevalence rates relative to the rest of the states and the District of Columbia for the 2008/9 survey. Vermont prevalence rates are among the highest in the nation for underage drinking, underage binge drinking, young adult drinking, young adult binge drinking, and marijuana use across all age groups.

Figure 1: YRBS Alcohol and Drug Lifetime Prevalence Rates 1999-2011
(Source: Vermont Department of Health)

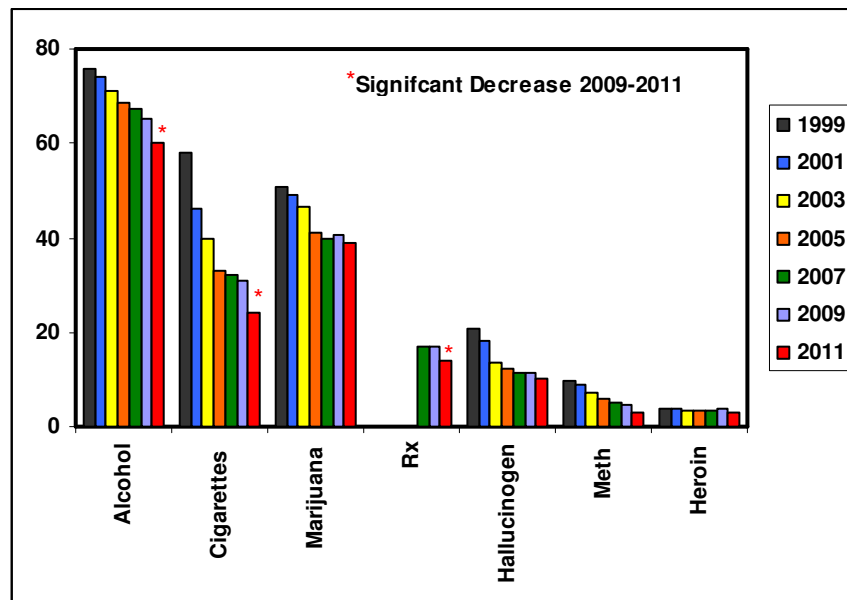


Table 1
Summary of Statewide Prevalence Estimates from NSDUH
 (Source: Office of Applied Studies, SAMHSA)

<i>NSDUH Categories</i>	<i>2002/3</i>	<i>2008/9</i>	Significant Change	2008/9 VT Ranking
<i>Alcohol</i>				
Past Month Consumption 12+	58.4	60.2		7
Past Month Binge Drinking 12+	25.5	26.0		5
Past Month Consumption (Age 12-20)	35.6	36.6		1
Past Month Binge Drinking (Age 12-20)	25.8	24.6		1
Past Month Consumption 12-17	22.0	18.3	↓	5
Past Month Binge Drinking 12-17	14.7	10.8	▼	9
Past Month Consumption 18-25	73.5	73.7		2
Past Month Binge Drinking 18-25	49.2	51.9		3
Past Month Consumption 26+	60.7	62.7		10
Past Month Binge Drinking 26+	22.9	23.5		18
<i>Tobacco</i>				
Past Month Tobacco Products 12+	30.6	27.6	↓	37
Past Month Tobacco Products 12-17	18.3	12.6	▼	21
Past Month Tobacco Products 18-25	52.6	44.4	▼	23
Past Month Tobacco Products 26+	28.5	26.7		37
Past Month Cigarette Use 12+	25.4	22.3	↓	41
Past Month Cigarette Use 12-17	14.8	8.7	▼	28
Past Month Cigarette Use 18-25	47.6	38.0	▼	23
Past Month Cigarette Use 26+	23.0	21.2		43
<i>Marijuana</i>				
Past Month Marijuana Use 12+	9.8	10.8		2
Past Year Marijuana Use 12+	15.9	16.0		2
Past Month Marijuana Use 12-17	13.3	9.7	▼	2
Past Year Marijuana Use 12-17	22.7	16.6	▼	3
Past Month Marijuana Use 18-25	27.0	30.6		1
Past Year Marijuana Use 18-25	44.6	45.0		1
Past Month Marijuana Use 26+	6.3	7.7		3
Past Year Marijuana Use 26+	10.1	11.2		2
<i>Illicit Drug Use Other than Marijuana</i>				
Illicit Drug Use Past Month 12+	3.9	3.9		15
Illicit Drug use Past Month 12-17	6.8	4.1	▼	39
Illicit Drug Use Past Month 18-25	9.2	12.0	↑	1
Illicit Drug Use Past Month 26+	2.6	2.6		27
<i>Rx Misuse (Nonmedical Use of Pain Relievers)</i>				
Rx Misuse Past Year 12+	5.4	4.6		34
Rx Misuse Past Year 12-17	8.9	5.8	▼	41
Rx Misuse Past Year 18-25	14.6	13.6		17
Rx Misuse Past Year 26+	3.3	3.0		37
<i>Cocaine</i>				
Past Year Use of Cocaine 12+	3.0	3.0		4
Past Year Use of Cocaine 12-17	2.8	1.2	▼	12
Past Year Use of Cocaine 18-25	9.7	10.2		1
Past Year Use of Cocaine 26+	1.9	2.0		8

▼ = Significant decrease from 2002/3 to 2008/9 (p<.05)

↓ = Trending decrease from 2002/3 to 2008/9 (p<.10)

↑ = Trending increase from 2002/3 to 2008/9 (p<.10)

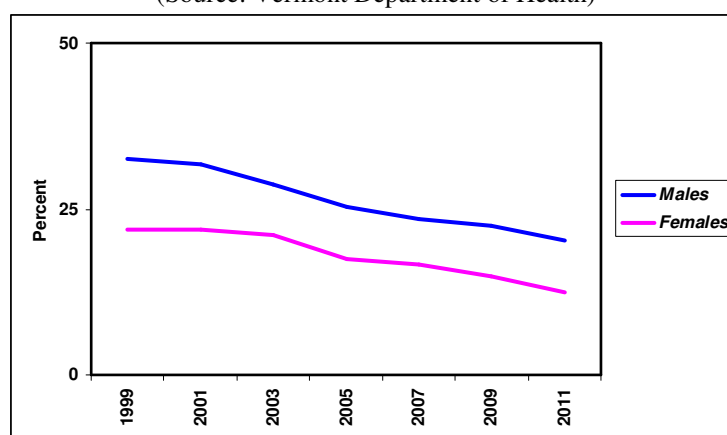
Additional Indicators of Substance Use, by Substance

Alcohol

State-level surveys (Table 1) indicate that Vermont ranks at or near the top in the nation in underage drinking, underage binge drinking, young adult drinking and binge drinking. This consistent finding endures across different surveys and years. Consumption across the country in general has decreased over time, but the relative ranking of Vermont has remained high.

There is some good news as well. The 2011 YRBS shows a significant decrease of alcohol consumption, cigarette use, and prescription drug misuse among 9th – 12th graders (Figure 1). Furthermore, research has consistently demonstrated that early onset of regular drinking is predictive of later alcohol use disorders. As shown in Figure 2, the proportion of Vermont 9th – 12th grade students who report drinking before age 13 has decreased significantly since 1999 for both males and females as reported on the YRBS. This trend is also reflected nationally, albeit less dramatically than in Vermont.

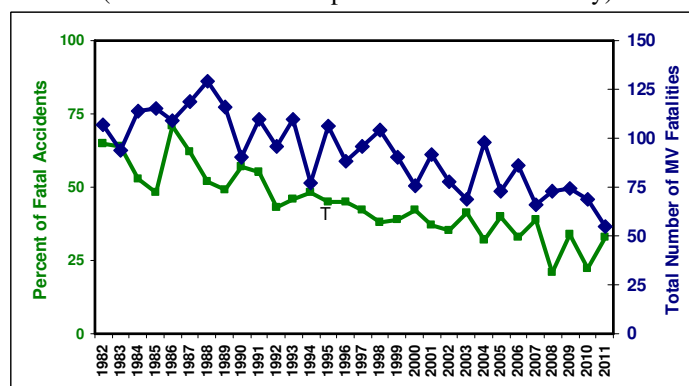
Figure 2: First Drink Before Age 13
(Source: Vermont Department of Health)



In addition, as shown in Figure 3, there has been a significant decrease in both the raw number of motor vehicle fatalities and the percent of alcohol related motor vehicle fatalities (ARMVF) in Vermont from 1982-2011. We note the decrease in this rate is likely attributable to a number of factors working in concert: safer cars, the minimum legal drinking age, the *per se* limit for intoxication, increased awareness of the dangers of drinking and driving, increased enforcement of DUI laws, and other unspecified factors. Vermont's rate of decrease in ARMCF also mirrors the national trend.

Figure 3: Number of Motor Vehicle Fatalities and Proportion of Motor Vehicle Fatalities that Were Alcohol Related, 1982-2011

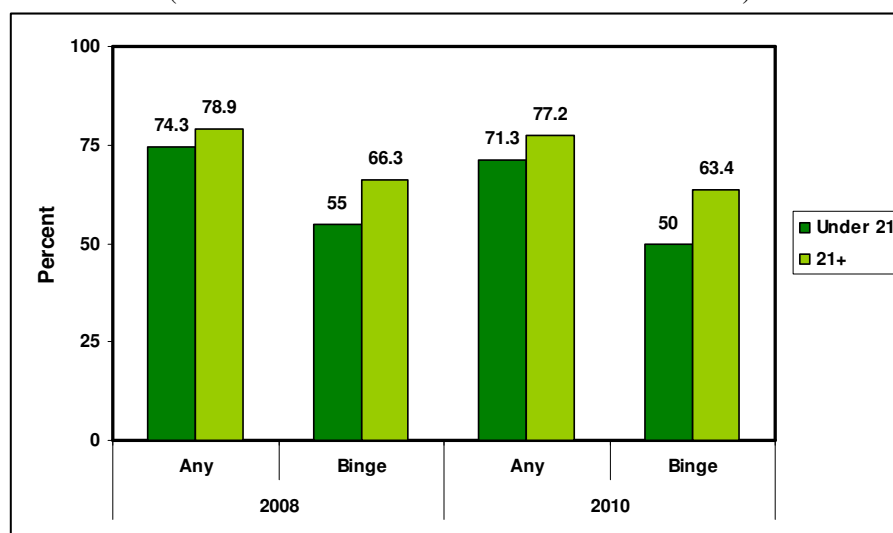
(Source: Vermont Department of Public Safety)



The Pacific Institute for Research and Evaluation (PIRE) in collaboration with the Vermont Department of Health conducted two surveys to provide additional data for helping plan and support intervention strategies and evaluating the results of the SPF-SIG. The first was the Core Survey on Alcohol and Drug use aimed at individuals attending college conducted in the fall of 2008, and repeated in 2010. All 25 colleges accredited in Vermont were invited to participate in the survey and 11 accepted our initial invitation, including the three schools with the largest enrollments. In 2010, 9 of these schools re-administered the Core. Figure 4 presents representative data from the survey on the past 30 days consumption of any alcohol and binge drinking in aggregate for the 9 schools that participated in both surveys. These data are weighted by gender, class year, and college to accurately reflect population characteristics.

Figure 4: Core Survey Estimates of Alcohol Consumption in Past 30 Days Consumption and Binge Drinking, 2008 & 2010

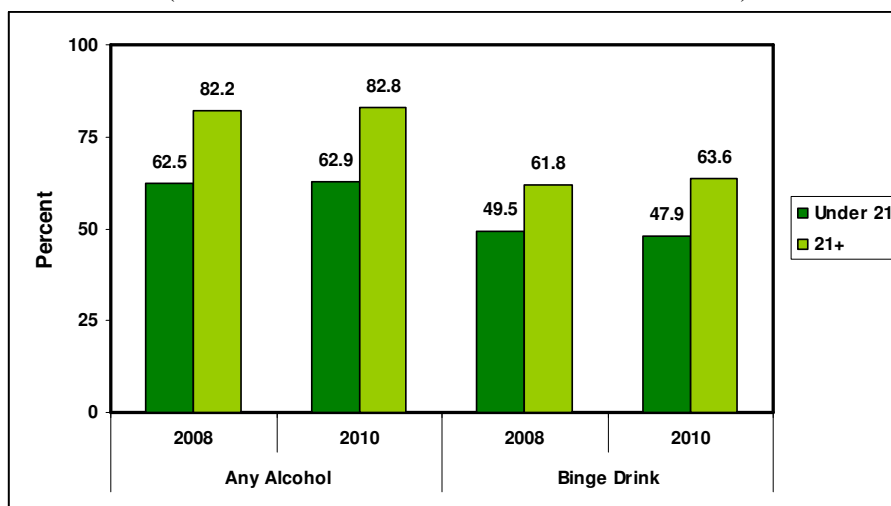
(Source: Pacific Institute for Research and Evaluation)



Also in the fall of 2008, PIRE and VDH developed and implemented a Young Adult Survey (YAS) in an attempt to collect data on non-college youth 18-29. This population's use has been particularly difficult to assess on the state level due to insufficient numbers for meaningful analyses. The YAS collected a convenience sample by employing a number of recruitment techniques including posters in locations where there would be a high density of the target demographic, Facebook ads, and ads in community newspapers. Respondents were offered the choice of a web-based or paper survey. A total of 991 surveys were completed in 2008 and 1268 in 2010, representing a wide geographic distribution. Figure 5 presents data for alcohol consumption and binge drinking. The data show a pattern similar to that observed with the Core Survey, in which prevalence rates of both any alcohol use and binge drinking are notably higher among persons age 21 and over. As with the Core survey, a complete report on the YAS is available as an appendix to the Profile.

Figure 5: Young Adult Survey Prevalence of Alcohol and Binge Drinking Past 30 Days by Age Group, 2008 and 2010

(Source: Pacific Institute for Research and Evaluation)



The 18+ past month alcohol consumption rate measured by the Behavioral Risk Factor Survey System (BRFSS) for the three year period 2008-2010 is 64% (5th highest in the US). The binge drinking rate for the same period is 17% (15th highest in the US). Both these rates have been stable for a number of years.

Tobacco

Tobacco is a leading cause of health-related problems in the U.S. Rising product prices due largely to tax increases as well as increased public awareness of the health hazards of tobacco have combined to substantially reduce the prevalence of smoking in recent decades. Nonetheless, given the health risks associated with initiating and continued smoking, contemporary prevention efforts remain extremely important.

NSDUH data (Table 1) show several significant declines related to tobacco use over time. Figure 6 shows the decline in per capita (ages 18+) cigarette sales, while Figure 7 documents the decline in prevalence of past 30 day smoking among adolescents for the US and Vermont. In 2011, there was a significant decline in past 30 day cigarette use among high school adolescents as measured by the YRBS (Figure 7). From 1999-2011 there was a 55% reduction in smoking among adolescents in Vermont. Figure 7A shows the trend of current smokers (ages 18+) measured by the BRFSS which is less dramatic than the adolescent data but nonetheless represents a 39% decline in smoking rates among adults.

Figure 6: Wholesale Cigarette Sales Per Capita (18+) For U.S. and Vermont, 1990-2010

(Source: Vermont Department of Health & Centers for Disease Control and Prevention)

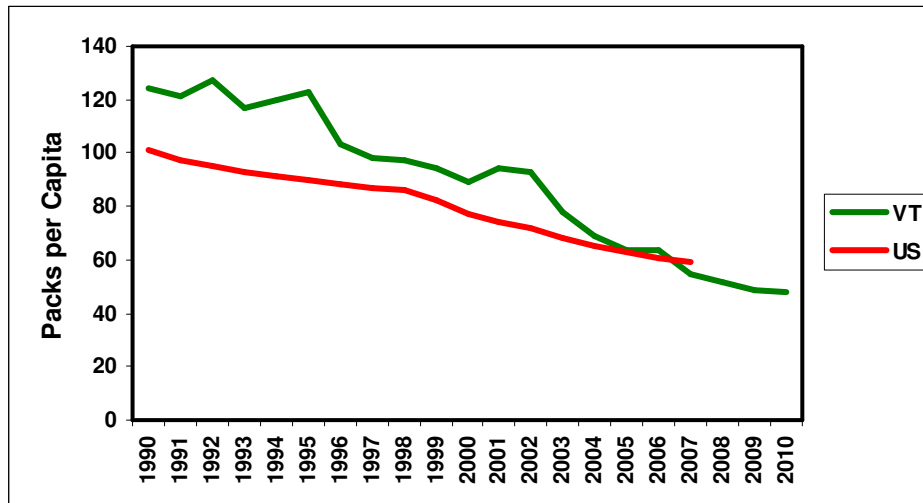


Figure 7: YRBS HS Prevalence of Cigarettes Past 30 Days, 1999-2011

(Source: Vermont Department of Health & Centers for Disease Control National Center for Chronic Disease Prevention and Health Promotion)

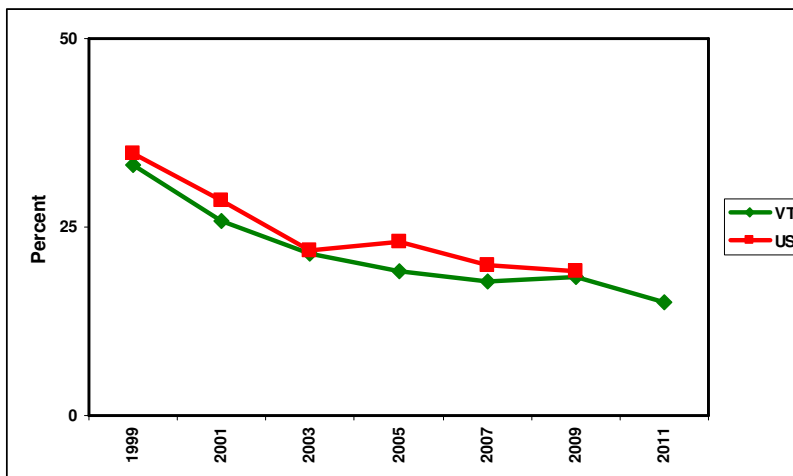
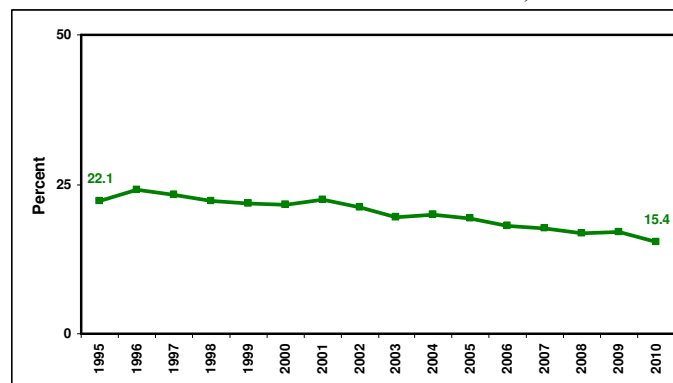


Figure 7A: BRFSS Vermont Current smokers (18+), 1995-2011

(Source: Vermont Department of Health & Centers for Disease Control National Center for Chronic Disease Prevention and Health Promotion)



Marijuana

As portrayed in Table 1 and other general surveys Vermont youth and young adults lead the country in the prevalence of marijuana consumption. Figure 8 presents YRBS prevalence rates of past 30 day marijuana use for high school (9th-12th grade) from Vermont and the US over time. Note that for both Vermont and National data, the trend is flattening out starting in 2007 which is also reflected in the Monitoring the Future (MTF) national data set. MTF reports that daily marijuana use among high school seniors is at a 30 year peak. Figures 9 and 10 from the Core survey and the YAS respectively also indicate widespread use of marijuana among 18-25 year olds. These data also suggest that marijuana use is more prevalent in the college samples than among their same-age peers; however, we note the significant increase in reported use of marijuana in the past 30 days among 18-20 year olds in the YAS from 2008 to 2010.

Figure 8: YRBS Prevalence of Marijuana Use Past 30 Days, 1999-2011
(Source: Vermont Department of Health)

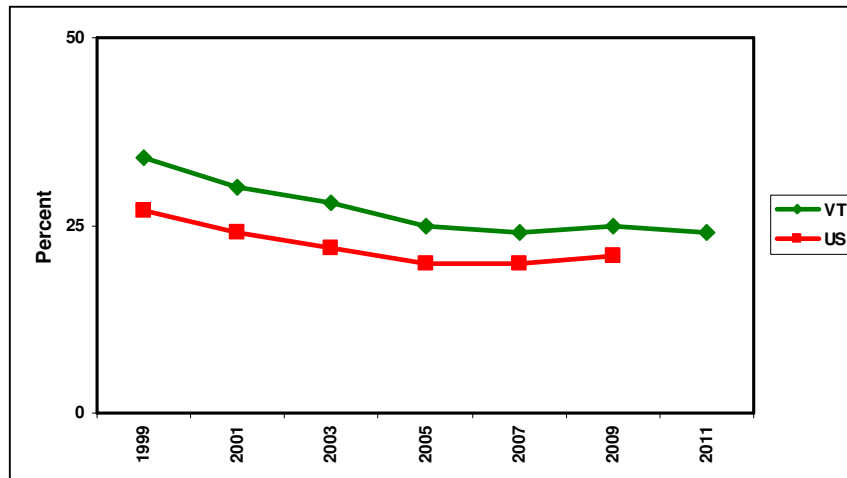


Figure 9: Core Survey Prevalence of Marijuana Use Past 30 Days, 2008-2010
(Source: Pacific Institute for Research and Evaluation)

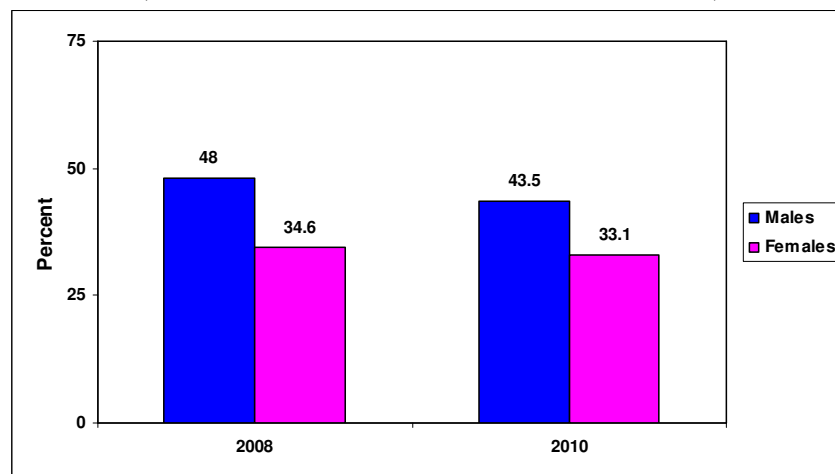
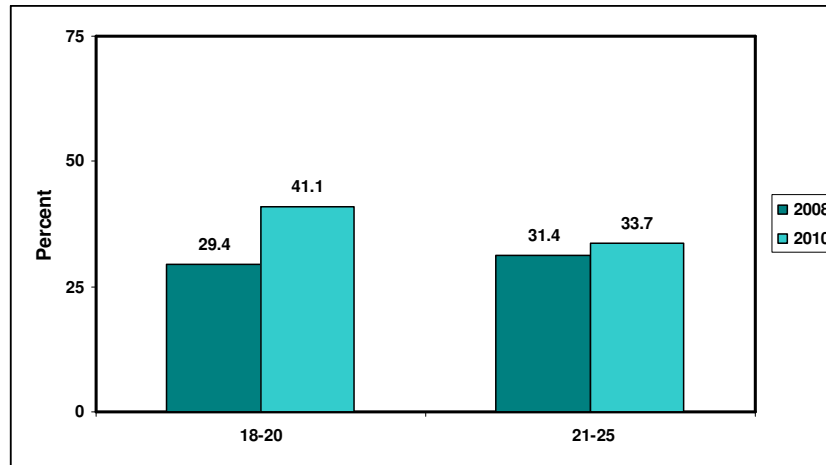


Figure 10: Young Adult Survey Prevalence of Marijuana Use Past 30 Days by Age Group, 2008-2010
(Source: Pacific Institute for Research and Evaluation)



Cocaine

As Table 1 indicates, NSDUH data continue to show that cocaine use among 18-25 year olds is of concern. Vermont ranks number 1 in the country for prevalence of cocaine among this age group. We note that cocaine use in Vermont as reported by NSDUH did not increase from previous years but that other states prevalence rates significantly decreased over the past several years which has the effect of elevating the ranking of Vermont. Adolescent prevalence rate of cocaine as measured by the YRBS remains low ($\approx 4\text{-}5\%$) and steady across time. The YRBS prevalence rates for both cocaine and heroin have not changed over time (1999-2011).

Nonmedical Use of Prescription Drugs

Nonmedical use of prescription drugs (in particular opiate pain relievers) has garnered much attention in Vermont and across the U.S., especially in the past few years. However, all epidemiological data consistently show no evidence of an increase in prevalence of use. Consumption questions were first asked on the 2007 YRBS and the 2007 BRFSS; therefore, there are three data points for the YRBS (2007, 2009 & 2011) and four for the BRFSS (2007-2010). The YRBS prevalence of prescription drug misuse among 9th-12th graders was 17% in 2007 and 17% in 2009. In 2011 there was a significant reduction to 14%. There were significant decreases from 2007-2010 in both lifetime and past month misuse of prescription medications reported in the BRFSS for age 18+ (Table 2). NSDUH data (Table 1) also show an overall decrease in prevalence rates of nonmedical use of pain relievers from 2002/3-2008/9 for all age groups; for 12-17 year olds, this decrease was significant. Admissions to Vermont Emergency Departments for any opiate overdose have not changed from 2002 (n=122) to 2010 (n=120); hospital admissions have also remained flat across the same time period. Finally, the proportion of deaths attributable to prescription opiates reported by the Medical Examiner has decreased from 2007 to 2011.

Table 2: BRFSS Prevalence of Prescription Drug Misuse in Vermont, 2007 - 2010 for Age 18+
(Source: Vermont Department of Health)

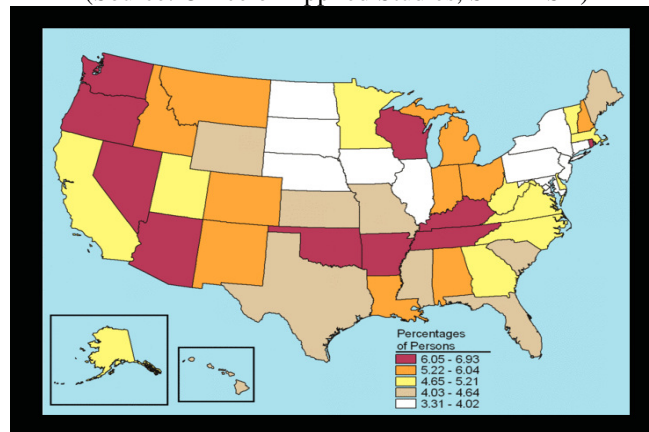
	Total %			
	2007	2008	2009	2010
<i>Ever used Rx drug w/o own prescription</i>	8.9	9.2	7.3	7.2
<i>Ever used Rx in greater amounts than prescribed</i>	7.5	7.7	5.9	6.0
<i>Used Rx drug w/o own prescription during past 30 days</i>	1.4	1.3	0.8	0.8
<i>Used Rx in greater amounts than prescribed during the past 30 days</i>	1.1	1.3	0.8	0.6

In order to put Vermont data in context, Figure 11 shows NSDUH prevalence categories of nonmedical use of prescription pain relievers for all 50 states and the District of Columbia. Vermont is in the middle of the distribution of prevalence rates for these substances.

In sum, all relevant current data suggest that trends in prevalence rates of nonmedical use of prescription drugs are flat or decreasing in Vermont across time and surveys. However, we note that the past year prevalence rate of prescription drug misuse is higher than for all other illicit substances with the exception of marijuana.

Figure 11: Nonmedical Use of Pain Relievers in Past Year among Persons Aged 12 or Older, by State for Data from 2007/2008

(Source: Office of Applied Studies, SAMHSA)



Other Substances

Prevalence rates of other substances including heroin, inhalants, steroids, and methamphetamines, are low and have not shown any significant movement over several years across several different surveys. We continue to monitor trends across all substances among both youth and adults.

Indicators of Substance Abuse Based on Health Services Utilization Data: Comparisons across Different Substances

One approach to help monitor the burden that specific substances have in Vermont is to compare rates across a common setting. We have analyzed longitudinal data from three such Vermont venues: hospital and emergency room discharge data for all hospitals in the State, and diagnostic data from the Fletcher Allen Emergency Department. This approach yields a relative ranking among classes of substances as they affect the Vermont health care system. In addition, we are able to examine any shift in trends over time with these data.

Hospital Discharge and Emergency Room Data

We analyzed inpatient discharge data from all the hospitals and ERs in Vermont by substances recorded in any of the 20 diagnostic fields available for data input. Figure 12 presents these data for males and Figure 13 for females for the years 2002-2008. Alcohol-related discharge diagnoses constitute the majority of the substance-related discharge diagnoses for this period, with marijuana and opiates a distant second. We note these data do not include diagnoses related to use of tobacco, which tend to be almost exclusively chronic conditions with long latency periods. Figures 14 and 15 present similar data from Vermont ERs.

Figure 12: Hospital Discharge Rates by Specific Substance Diagnoses, Males, 2002-2008
(Source: Vermont Uniform Hospital Discharge Data Set)

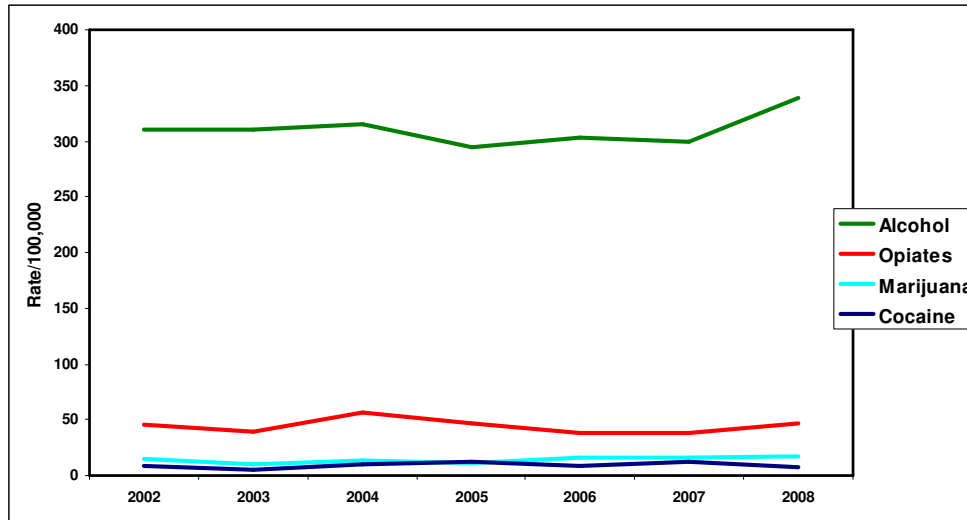


Figure 13: Hospital Discharge Rates by Specific Substance Diagnoses, Females, 2002-2008
(Source: Vermont Uniform Hospital Discharge Data Set)

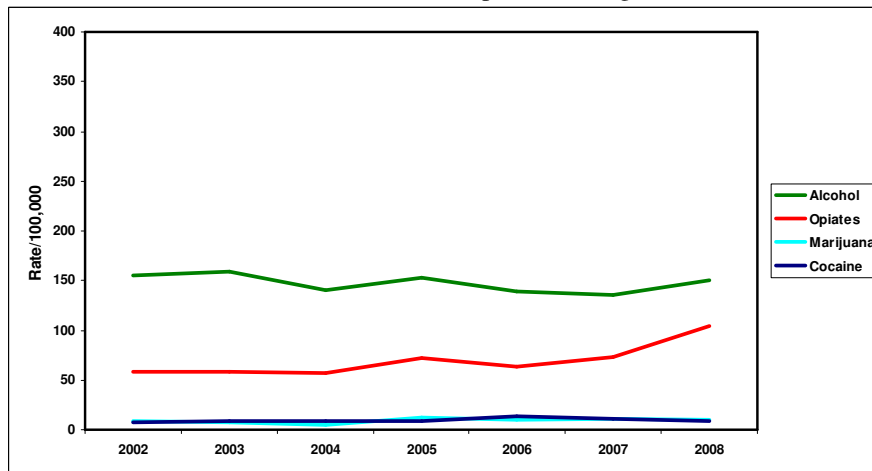


Figure 14: All VT ER Discharge Rates by Specific Substance Diagnoses, Males, 2002-2008
(Source: Vermont Uniform Hospital Discharge Data Set)

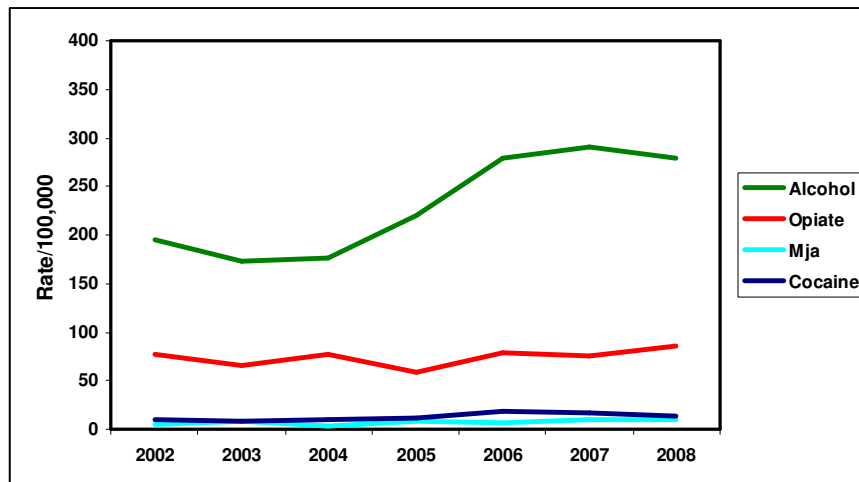
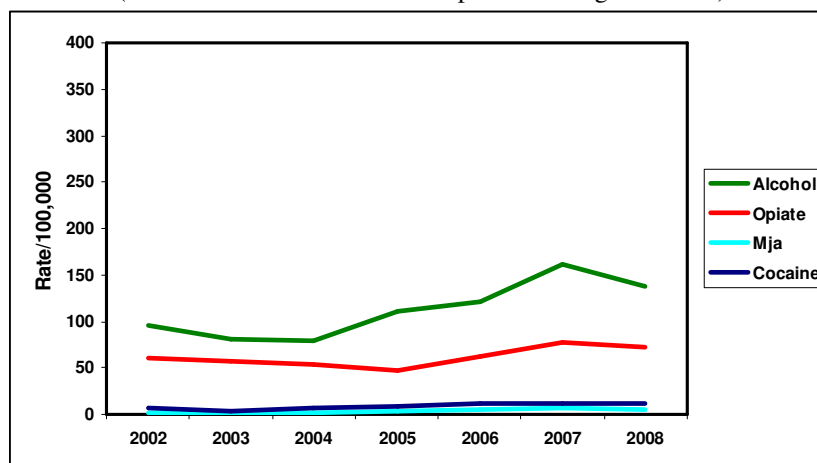


Figure 15: All VT ER Discharge Rates by Specific Substance Diagnoses, Females, 2002-2008

(Source: Vermont Uniform Hospital Discharge Data Set)



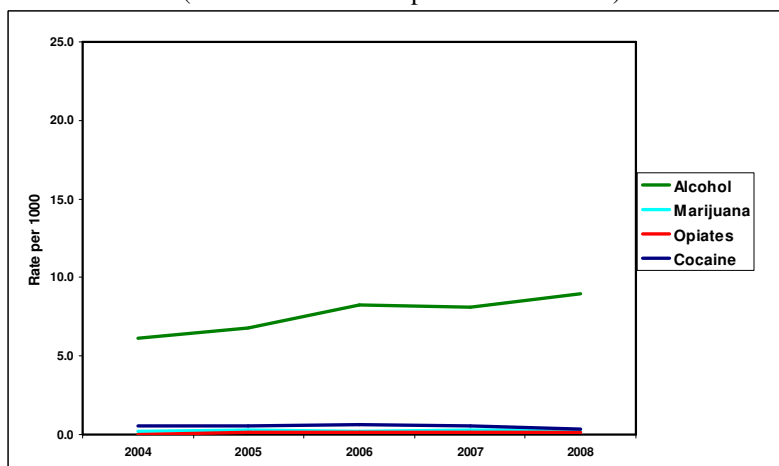
Fletcher Allen Health Care Emergency Department Data

The Fletcher Allen Health Center (FAHC) Emergency Department (ED) at the University of Vermont receives at least twice as many visits than any other ED in the state. Furthermore, since FAHC is the only Level 1 trauma center in the state, more serious cases are brought to this ED from other hospitals when practical and medically advisable.

We have obtained unprocessed¹ daily data from 2006 to the present directly from the FAHC ED in order to examine impression diagnoses uncontaminated by post-processing cost codes. Figure 16 presents rates of substance specific indicators in the daily data from FAHC (combined ages and genders for the period 2004-2008²).

Figure 16: FAHC ED Rates by Specific Substance Diagnoses, 2004-2008

(Source: Vermont Department of Health)



¹ "Unprocessed" refers to data that has not yet been coded for billing. There have been suggestions in the literature that hospital discharge data are coded to maximize reimbursement, which, if valid, could potentially compromise the validity of these data. However, after analyzing both the processed and unprocessed data sets, we found no differences in the rank order of substance abuse diagnoses.

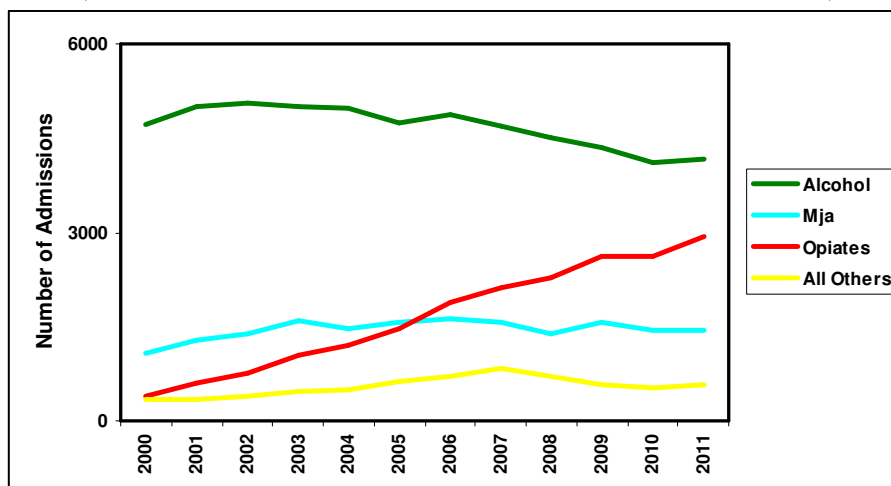
² We used the Burlington Hospital Service Area (HSA) for these computations. Since FAHC draws patients from the entire state (and other states), this procedure may slightly bias the estimates, although we do not believe this bias would be systematic (i.e., consistently more/less alcohol or drug cases from out of the HSA). Furthermore, we computed the proportion of FAHC ED patients who reported living in the Burlington HSA and determined that from January, 2005-October, 2010 this accounted for approximately 80% of all patients served by the FAHC ED and 90% of those living in Vermont. Since, we are interested in relative rankings to examine trends across specific classes of substances, this may be an issue that is more conceptual than real.

Other than alcohol, the unprocessed data do not show increasing trends of substance-related medical consequences in the ED. Furthermore, all substances exhibit very low rates for all years. We continue to receive daily reports (sent monthly for the previous month) from the FAHC ED and we will monitor these data and update the charts as necessary.

Treatment Data

Treatment data provide another perspective on the substance abuse burden in Vermont. We note that treatment data do not reflect rates of use and are subject to many influences other than just the prevalence of the underlying conditions and as such are not considered epidemiological in nature. Nonetheless, these data are relevant and important in describing a complete picture of substance abuse in Vermont and will be considered in future ADAP prevention and treatment planning. Figure 17 shows the number of treatment admissions for various substances spanning the years 1992-2008. These data indicate that while alcohol has been and remains the main substance of admission, treatment for abuse of non-heroin opiates show an increasing trend over the past several years.

Figure 17: Total Number of Treatment Admissions by Substance, 2000-2011
(Source: Substance Abuse and Mental Health Services Administration)



Behavioral Health Indicators

The SEOW has examined a number of behavioral health indicators with the assistance of our partners in the Department of Mental Health. In addition, we have analyzed appropriate indicators from the YRBS. Figure 18 shows the gender specific prevalence rates of substance use as a function of “feeling sad or depressed almost every day for 2 week”. These data strongly indicate that both males and females who report a marker of depression are at a significantly increased risk for substance use (odds ratios range from 2.2 to 3.8 and all are significant). Figure 19 shows prevalence rates of substance use in 2011 of being bullied or not and Figure 20 shows the same for those reporting bullying. Both being the victim and the perpetrator of bullying appears to be a risk factor for substance use in 9th-12th grade.

Figure 18: Sad or Depressed for at Least Two Weeks & Substance Use – YRBS 2011
(Source: Vermont Department of Health)

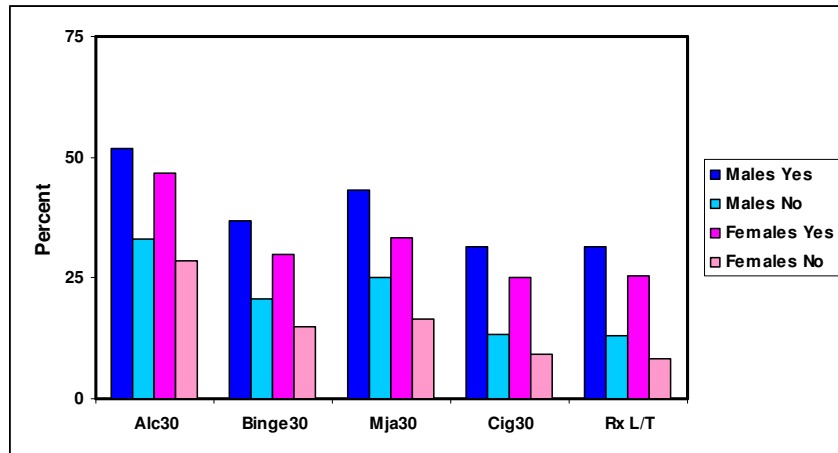


Figure 19: Report Being Bullied and Substance Use – YRBS 2011
(Source: Vermont Department of Health)

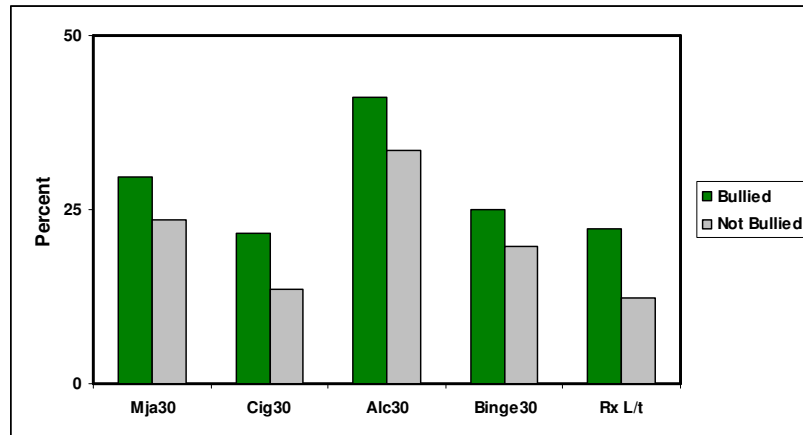
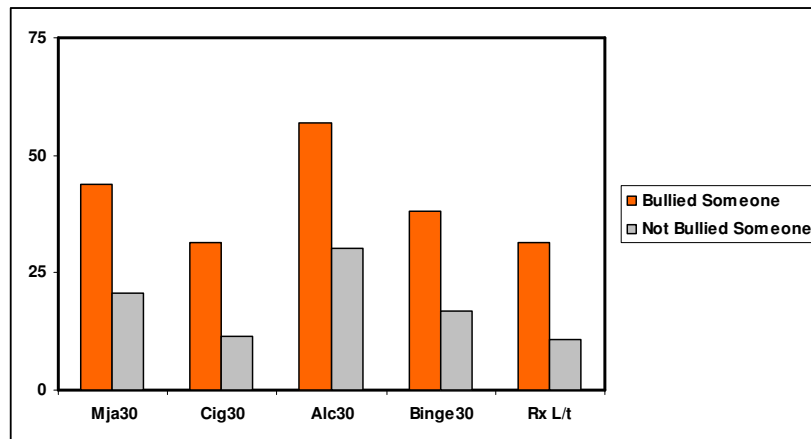


Figure 19: Report Bullying Someone and Substance Use – YRBS 2011
(Source: Vermont Department of Health)



Co-occurring substance abuse disorder is a documented problem in the mental health field. If unrecognized or untreated substance abuse can compromise treatment options for a range of psychiatric diagnoses. Since pharmacotherapy is at least an adjunct in the treatment of many mental disorders, it is

paramount to obtain data on patients' use of alcohol and other drugs for their own safety and treatment efficacy. Figures 20 and 21 present data compiled by the Department of Mental Health relevant to co-occurring substance abuse disorders in community mental health patients. Figure 20 documents an increase in the diagnosis of substance abuse disorders over the 10 year period 2001-2010 across all age groups in Community Mental Health Centers across Vermont. Figure 21 shows the rate of co-occurring disorders in clients who were admitted to the Vermont State Hospital an acute care facility for individuals with more serious mental health problems in 2011. Figure 22 represents co-occurring data on all Vermont mental health services recipients by age group and gender. It is clear from all these data that substance abuse remains a serious problem in a substantial proportion of individuals entering the mental health system of care.

Figure 20: Percent of Community Mental Health Clients with a Co-occurring SA Diagnosis by Age Group

(Source: Vermont Department of Mental Health)

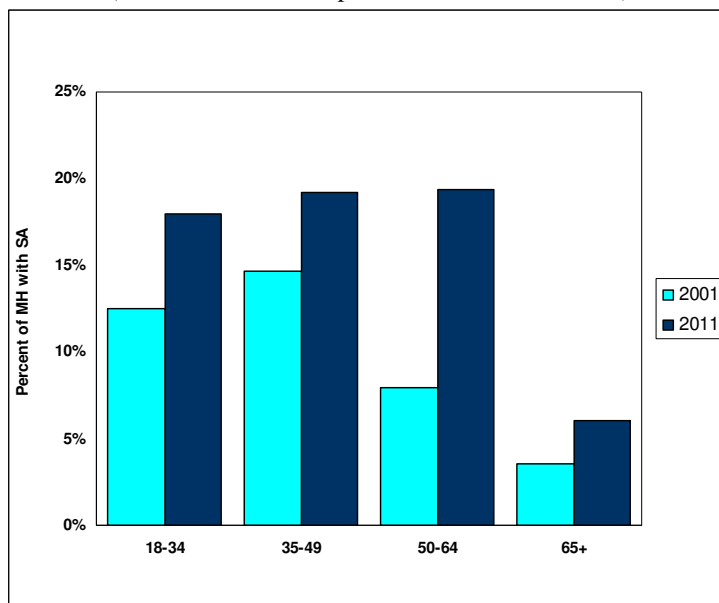


Figure 21: Percent of Vermont State Hospital Clients with a Co-occurring SA Diagnosis by MH Diagnosis 2011

(Source: Vermont Department of Mental Health)

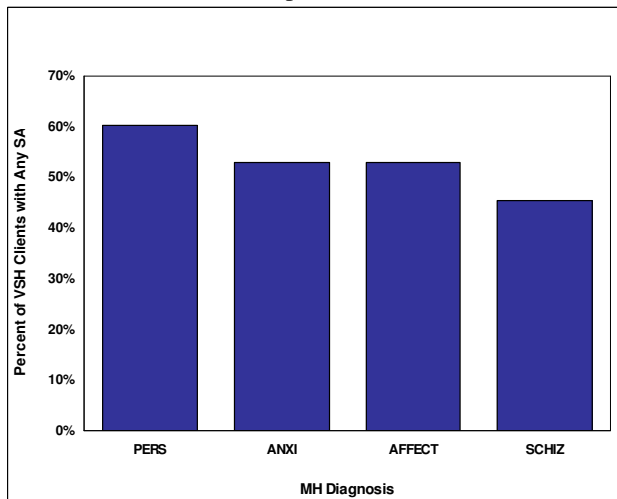
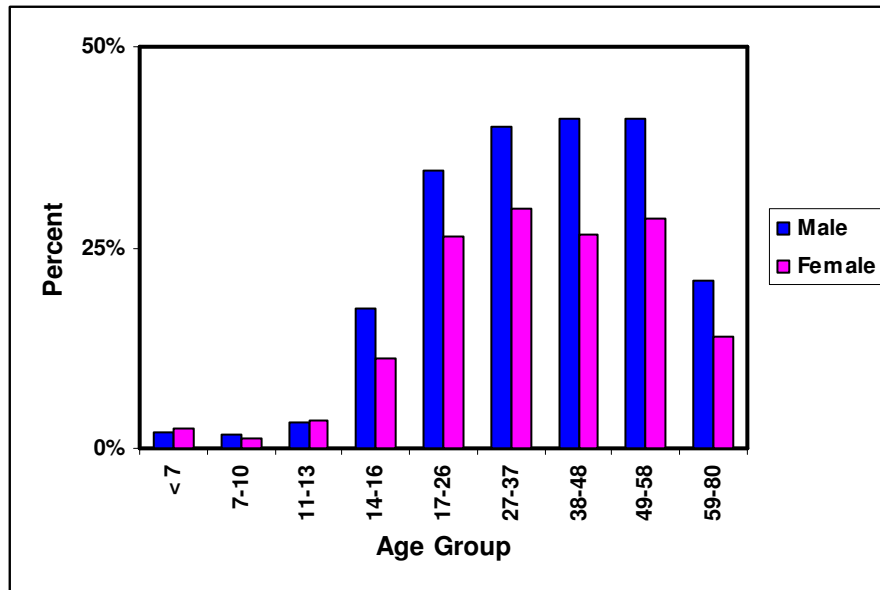


Figure 22: Percent of Vermont Mental Health Recipients with a Co-occurring SA Diagnosis by Age and Gender 2011

(Source: Vermont Department of Mental Health)



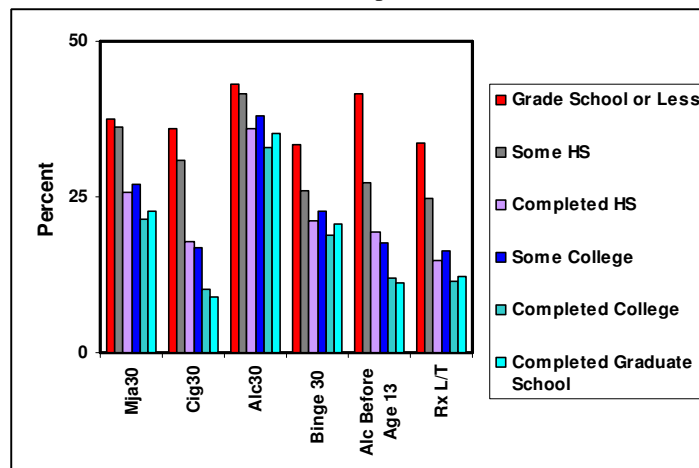
Special Populations/Health Disparities

As indicated above, Vermont does not have an ethnically diverse population. However, we have identified two subpopulations that may be at risk for increased of substance abuse: low socioeconomic status and women of child bearing age. In addition, National data have identified military families of deployed soldiers as being at risk, but we have been unable to obtain any Vermont data on this group.

As a marker for low SES we use Mother's highest level of education reported on the YRBS. This has been shown in the past to correlate highly with family SES. Figure 23 shows data from the 2011 YRBS. As expected, lower educational attainment of the Mother is generally associated with higher substance use among 9th -12th grade students.

Figure 23: Mother's Highest Level of Education and Student Reported Substance Use 2011 YRBS

(Source: Vermont Department of Health)



Data collected through the Pregnancy Risk Assessment Monitoring System (PRAMS) indicate that Vermont women lead the nation in drinking during the last three months of pregnancy. Surprisingly, data indicate that older and more educated women in Vermont report drinking more than younger less educated women before becoming pregnant. More importantly these same women report higher rates of alcohol consumption during the last three months of pregnancy (Figures 24 and 25). This likely reflects some confusion in the medical field despite a abundance of research suggesting that there is no known safe lower limit of alcohol consumption during pregnancy

Figure 24: Drinking During Last 3 Months of Pregnancy (Age)
(Source: Center for Disease Control and Prevention)

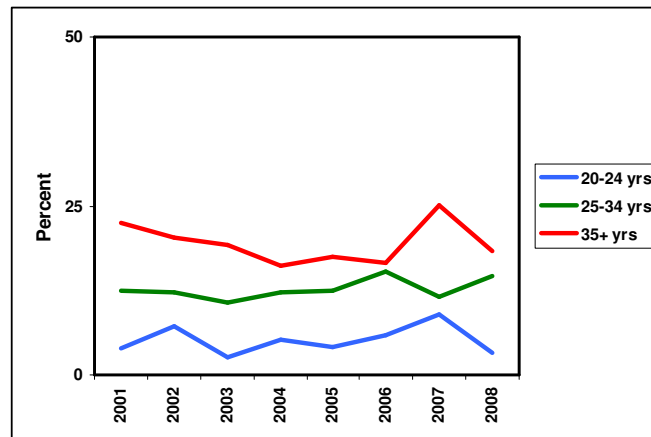
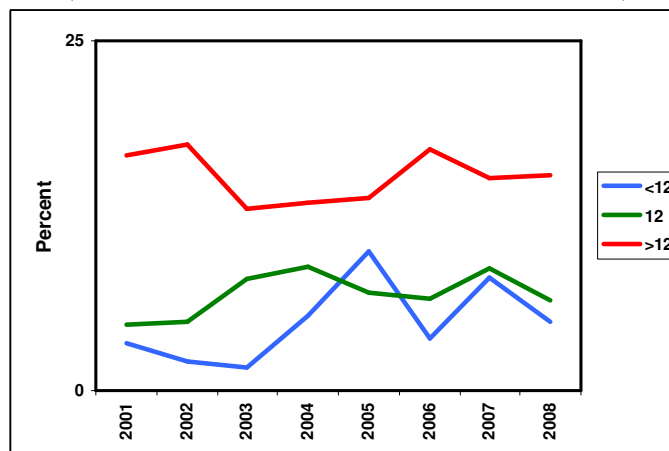


Figure 25: Drinking During Last 3 Months of Pregnancy (Educational Level)
(Source: Center for Disease Control and Prevention)



Summary and Conclusions

Based on as many data sources as the SEOW could locate, process, and analyze, the priorities identified in the 2007 Epidemiological Profile remain the same in this 2012 update. Based on a thorough review of available data sets the SEOW recommends that prevention efforts in Vermont should continue to assign a high priority to reducing:

1. underage drinking
2. high risk drinking among 21-24 year olds
3. marijuana use among those under 25

The SEOW has determined that prevalence and consequences of other substances do not reflect the same level of concern exhibited by alcohol and marijuana at this time. Furthermore, the age groups of greatest concern with respect to these problems are adolescents and young adults. However, a secondary level of concern, accompanied by close monitoring of the data, should be assigned to cocaine use among 18-25 year olds. We also highlight the need to address health disparities that include lower SES families. Furthermore, the alcohol consumption rate among pregnant Vermonters, especially those older and more educated, is unacceptably high.

These recommendations are based on several types of comparisons, including comparing rates of use and consequences of use across substances, comparing Vermont's rates with national estimates, and comparing across years (i.e., examining trends). Our recommendations do not always explicitly take into consideration the severity of consequences of use (e.g., by examining death and disability rates or monetary costs), which are much more difficult to quantify; ascertaining the proportion of injury or disease attributable to substance use/abuse is a complex procedure subject to a number of sources of systematic and unsystematic error that complicate methodological clarity.

Although anecdotal reports abound, systematic data to substantiate widespread or increasing use/abuse of other substances are at this time absent or equivocal. This does not mean that other substances should receive no consideration, but rather that the three specific areas of concern identified here continue to warrant heightened attention. We recognize that this conclusion is subject to revision as we obtain and analyze new data on a continuing basis.